SDDC OPERATIONS CENTER
CUSTOMER ADVISORY
October 21, 2004
CA-04-10/21-0136

Subject: Department of Defense (DOD) Electromagnetic Radiation Emission Standards for Motor Carrier Trailer Assets

Reference: CARRIER ADVISORY, dated October 12, 2004, CAR-04-10/12-0097 Subject: Use of Leased or Rented Trailers with Trailer-Tracking Technology

Purpose: To advise shippers of new DOD electromagnetic radiation emission standards, to explain the procedures carriers must follow to obtain full use of these emerging technologies while transporting DOD cargo and what shippers must do to ensure carrier compliance.

Scope: This standard is applicable to all DOD approved motor carriers with owned, rented, and leased assets involved in the transport of DOD arms, ammunition, explosives (AA&E); hazardous (Class1/2.1/3/4 only) or classified material; and/or spare parts and components of same.

Background: Some safety, security, and accountability technology used by both the DOD and the carrier industry emits electromagnetic radiation while transmitting data.

The transmission of this electromagnetic radiation could present hazards to personnel and cargo if they are not properly controlled before use with DOD shipments that are sensitive to these emissions (hereafter referred to in this advisory as "sensitive materials/shipments"). These hazards could include premature detonation or rendering cargo inert/ineffective for future use; e.g., fleet (trailer) management devices (trailer-tracking), surveillance cameras, tamper-proof devices, electronic seals and locks, and cargo sensors.

Through this advisory, the Military Surface Deployment and Distribution Command (SDDC) will delineate the DOD certification, validation, documentation, and emission standards to nullify safety concerns related to the use of these electromagnetic radiation-emitting technologies.

Carriers must go through three steps before utilizing an electromagnetic radiation-emitting device on any trailer asset. These three steps are:

1. **Certification:** All electromagnetic radiating devices must first be Hazards of Electromagnetic Radiation to Ordnance (HERO) certified by an approved DOD agency. The HERO certification establishes safe distances a particular device must remain away from ordnance or sensitive materials/shipments, to be considered non-hazardous to the material. Although devices may have been tested

for HERO certification, this does not mean a device is automatically safe for shipment; establishing a safe standoff distance is the first step in determining if a device may be used when transporting sensitive materials/shipments.

2. **Validation:** All HERO-certified devices must be approved for use by the Naval Ordnance Safety and Security Activity (NOSSA), Code N72, Indianhead, MD, and tested by the Naval Surface Warfare Center Dahlgren Division (NSWCDD), Code J52, Dahlgren, VA, in the installed configuration on the trailer asset and proven to be within DOD safe operating parameters. Although a device was tested for HERO certification, it does not mean the device is automatically safe for shipment; keeping below the approved level of emissions for radiating inside the cargo carrying area is the key to whether a device may be used when transporting sensitive materials/shipments. HERO certified devices must be validated with NOSSA and its technical agent, NSWCDD. (The DOD approved emission standard is delineated in attachments 1 and 2.)

3. **Documentation:** Copies of all approved NOSSA validations must be received by SDDC as part of the SDDC carrier performance record; in turn, carriers will then receive a reply from SDDC that these steps were successfully completed.

Once these steps are completed and documented, a carrier may utilize the electromagnetic radiation-emitting devices while transporting DOD sensitive materials/shipments.

Shipper Guidance: Copies of all approved NOSSA validations will be available as part of the SDDC carrier performance record. Once the SDDC receives a copy of the validation documentation, the SDDC will issue a Customer Advisory notice as to which carriers are using approved HERO compatible devices on their trailers and the exact nature of those devices.

The DOD took steps to ensure all trailers equipped with electromagnetic radiation-emitting devices are not used to transport DOD sensitive materials/shipments until the carriers have taken the steps above. Carriers were advised they are prohibited from using trailer assets with electromagnetic radiating devices for sensitive materials/shipments until the asset is validated by the DOD, IAW procedures above and when the asset is documented in the SDDC carrier performance records.

The goal of this advisory is to ensure the continued safety of personnel, sensitive materials/shipments, and public.

Policy: Standards and procedures delineated in this advisory will be documented in the Defense Transportation Regulation, Part II, and in SDDC Freight Traffic Rules Publications; until regulations/rules are updated to reflect this information, this advisory serves as policy unless superseded, amended, or rescinded.

If a non-validated/non-documented carrier furnishes a trailer equipped with a electromagnetic radiation-emitting device, shippers must reject the carrier equipment IAW DTR, Chapter 207, Carrier Performance, as “unsatisfactory”; notify SDDC at e-mail: mtfecarrierperformance@sddc.army.mil, and proceed with a carrier performance action. After 21 October 2004, only carrier equipment with DOD HERO certification, validation, and documentation will be provided for the pick up of "sensitive material/shipments. Carriers are expected to ensure non-approved trailers are not furnished to transport sensitive materials/shipments, therefore shippers are not expected to search every trailer for these devices. However, if a device is detected through the shipper’s normal safety inspection, the shipper should verify the carrier is approved to use such devices. Each Service may provide their shippers additional Service specific guidance on this matter (e.g., DD 626 inspections).

Point of Contact: SDDC point of contact for this advisory is MAJ Blondin, USA, at 1-757-878-7430, or e-mail: blonding@sddc.army.mil.

Attachment 1 to SDDC Domestic Customer Advisory CA-04-10/21-0133, DOD Electromagnetic Radiation Emission Standard for Motor Carrier Trailer Assets

Electromagnetic Radiation Hazards: Hazards caused by a transmitter/antenna installation that generates electromagnetic radiation in the vicinity of ordnance, personnel, fueling operations, and volatile material in excess of established safe levels or increases the existing levels to a hazardous level; of personnel, fueling, or ordnance installation located in an area that is illuminated by electromagnetic radiation at a level that is hazardous to the planned operations or occupancy. These hazards will exist when an electromagnetic field of sufficient intensity is generated to:

(a) Induce or otherwise couple currents and/or voltages of magnitudes large enough to initiate electro-explosive devices or other sensitive explosive components of weapon systems, ordnance, or explosive devices;

(b) Cause harmful or injurious effects to humans and wildlife;

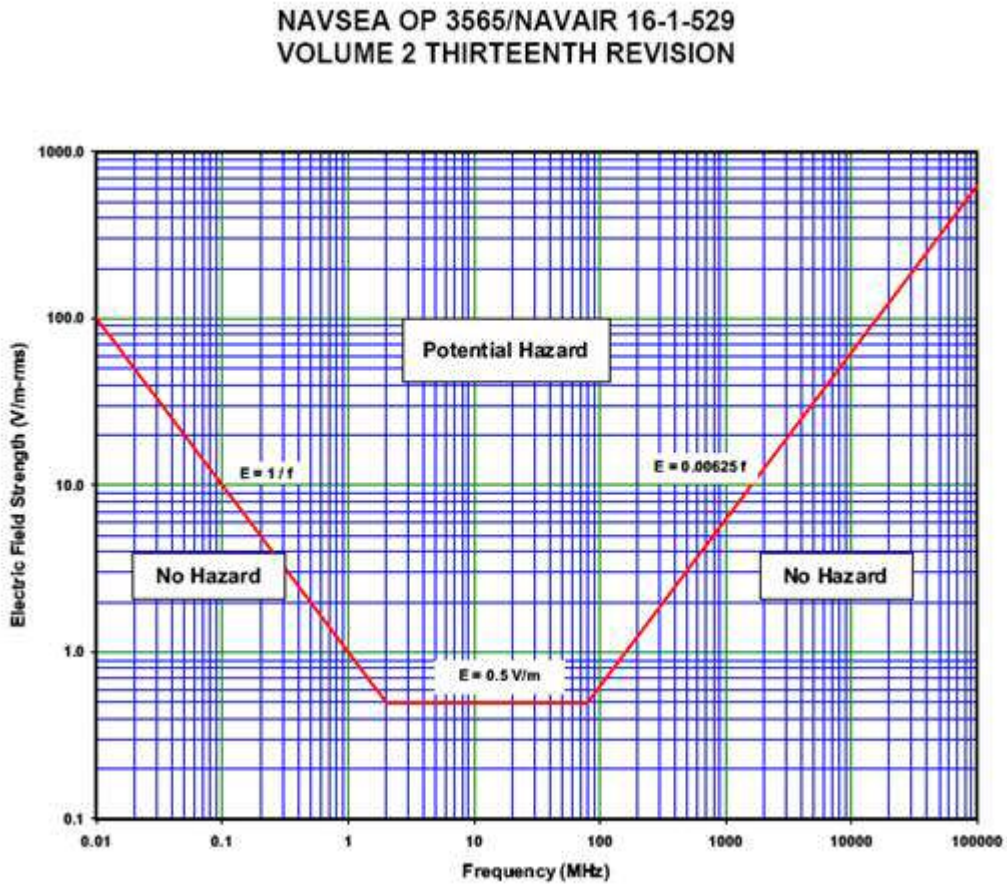
(c) Create sparks having sufficient magnitude to ignite flammable mixtures of materials that must be handled in the affected area;

(d) Cause a part or component to be rendered inoperable.

HERO Unsafe/Unreliable Curve: The HERO unsafe/unreliable curve (enclosure 2) is cited in NAVSEA OP 3565. This standard provides field strength values as a function of frequency and should be used as the not to exceed limit for the electromagnetic environment measurements within the cargo area of a trailer asset. This measurement can be made with field strength measuring equipment such as NARDA or Holiday probes.

Not to Exceed Limit: The 97 dBuV number is the not to exceed limit for electromagnetic environment measurements within the cargo area of a trailer asset. This number is not a direct field intensity reading but a resultant antenna terminal voltage which should be obtained only under laboratory test conditions since it is a function of the test fixture set up. This measuring technique is used to certify AIT equipment that directly illuminates ordnance or other sensitive materials and must operate within 12 inches (near-field).

Attachment 2 to SDDC Domestic Customer Advisory CA-04-10/21-0133, DOD Electromagnetic Radiation Emission Standard for Motor Carrier Trailer Assets



HERO Unsafe/Unreliable Curve